

AMENDMENTS TO THE CLAIMS

Claims 1-5 (Cancelled)

6. (Currently Amended) A method of X-ray diffractometry, comprising the steps of:
mounting the sample on a sample stage;
directing X-rays through a double pinhole collimator onto a sample to be measured;
diffracting the X-rays diffracted by the sample with an analyser crystal onto a detector;
rotating the sample and rotating the analyser crystal and the detector about coaxial axes;
measuring the diffracted X-ray intensity as a function of the angle of rotation of the sample
and the angle of rotation of the analyser crystal and detector;
mounting the sample on a sample stage;
rotating the analyser crystal and detector to a predetermined position;
rotating the sample whilst keeping the analyser crystal and detector in the predetermined
position and measuring the X-rays reaching the detector as a function of angle of sample rotation;
determining the sample rotation angle at which the measured X-rays are at a peak and
rotating the sample to that angle; and
rotating the sample and the analyser crystal and detector about coaxial axes; and measuring
the diffracted X-ray intensity as a function of rotation angle of the sample and the angle of rotation
of the analyzer crystal and detector.

7. (Original) A method of X-ray diffractometry according to claim 6 and further
including varying the size of at least one pinhole in the double pinhole collimator.

8. (Cancelled)

9. (Previously Presented) A method of X-ray diffractometry according to claim 6
and further comprising the step of:
rotating the sample and the analyser crystal and detector with rotation speeds substantially
in a 1:2 ratio.